

ABSTRACT OF THE DISCLOSURE

PROCESS AND DEVICE FOR ANALYSIS OF RADIOACTIVE OBJECTS

According to the invention, an object (2) and particularly a radioactive waste package that may contain fissile isotopes and/or fertile isotopes, is analyzed by irradiating the object by thermal, epithermal and fast neutrons resulting from a series of initial fast neutron pulses, the prompt and delayed neutron signals emitted by the object after each pulse are measured, these signals are accumulated, and the contribution  $S_p$  of prompt neutrons originating from thermal fission and the contribution  $S_r$  of delayed neutrons originating from thermal, epithermal and fast fission are determined from this sum of all signals, and the quantity of each isotope is determined using  $S_p$  and  $S_r$  and additional information about the isotope quantities.

Figure 2